

DEPARTMENT OF DEFENSE BLOGGERS ROUNDTABLE VIA TELECONFERENCE SUBJECT: AERIAL INSECT SUPPRESSION BRIEFERS: COLONEL JOHN WILLIAMS, COMMANDER, 757TH AIRLIFT SQUADRON MAJOR KARL HAAGSMA, ENTOMOLOGIST, 757TH SQUADRON, SERGEANT JOHN DANIELS, 910TH AERIAL SPRAY UNIT TIME: 10:00 A.M. EDT DATE: THURSDAY, OCTOBER 9, 2008

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SEAMAN WILLIAM SELBY (Office of Secretary of Defense Public Affairs):  
Okay, sir, I'm going to go ahead and get started here. And I'd like to welcome you all to the Department of Defense's Bloggers' Roundtable for Thursday, October 9th, 2008. My name is Seaman William Selby at the Office of Secretary of Defense Public Affairs, and I'll be moderating the call today.

Note to our bloggers on the line, please remember to clearly state your name and blogger organization in advance of your question. Respect our guests' time, keeping questions succinct.

And today our guest is -- are Lieutenant Colonel John Williams, commander of the 757th Air Lift Squadron; Major Karl Haagsma, an entomologist attached to the aerial spray group of 757th; and Senior Master Sergeant John Daniels. He's with the 910th Aerial Spray -- (inaudible) -- flight with the Air Force Reserves, aerial spray -- (inaudible) -- who will discuss the aerial spray mission and recent support to areas impacted by Hurricane Gustav and Ike.

And sir, if you have any opening statements, you can go ahead with that.

COL. WILLIAMS: Okay, this is Lieutenant Colonel Williams. How are you?

MR. SELBY: Very good, sir.

COL. WILLIAMS: I just wanted to talk a little bit about the concept of operations. We were asked by the governor from the state of Louisiana to deploy in mid-September. And our mission lasted from 21 September through the 2nd of October. The 757th Air Lift Squadron took two airplanes -- actually, three airplanes, two primaries and one spare -- down to Louisiana to position to spray a target area of 800,000 acres in southern Louisiana. Our aircraft are specially -- specially equipped, and we responded to the governor's request through FEMA to spray and control -- to spray and control the growing mosquito and fly populations in the aftermath of Hurricanes Gustav and Ike.

It's no secret that controlling the mosquito populations is very important, especially in the South, in the aftermath of the hurricanes. And the mosquitos -- what they do is they are disease carriers that can transmit

diseases like the West Nile virus and various forms of encephalitis as well as other unpleasant things.

In addition, the nuisance caused by biting mosquitos can seriously hamper recover activities for the states. State response was supported by FEMA and the centers for -- the Center for Disease Control, and the spray efforts were based out of Barksdale Air Force Base located near Shreveport, Louisiana. The pesticide that we sprayed from the aircraft is called DIBROM, and while very toxic to flying mosquitos, at the rate we apply it, it is non-toxic to people, pets and livestock.

Go ahead.

MR. SELBY: Thank you, sir. And we're going to go ahead and take some questions from the bloggers now. Chuck Simmins, you're first on the line.

Q Good morning, sir. Chuck Simmins from America's North Shore Journal. First of all, could you spell the name of the insecticide?

MAJ. HAAGSMA: Yes -- this is Major Haagsma. The insecticide's called Dibrom. It's D-I-B-R-O-M.

Q B -- boy, R-O-M?

MAJ. HAAGSMA: Yes. Now, that's the trade name. The actual, technical name, is called NALED. That's the chemical name.

Q Okay. All right.

Some of us with the Bloggers' Roundtable were fortunate enough to talk to officers and personnel from the 302nd Airlift Wing a couple of months ago. They were involved with firefighting in California, and they use a MAFF system to do that. Can you -- can someone describe the system used in your aircraft for spraying -- how it's set up and how it's deployed?

SGT. DANIELS: Hi, this is Sergeant Daniels. Yes, our system varies greatly from the MAFFS, if you will. Ours is called MASS -- M- A-S-S -- Modular Aerial Spray System. Unlike the firefighting system, which has a capability of dumping a large quantity because they're trying to saturate the ground and the vegetation with the retardant, we are controlling our spray very precisely, predominately in the mosquito control because we are doing what we call a space spraying. We are not saturating the ground. We are trying to put the product into the air to catch the flying vectors that are out there carrying the diseases.

Q Okay. So this is not a surface treatment. This is an aerial treatment.

SGT. DANIELS: Absolutely. It is what we consider and what we call a space spray.

Q Okay. So you're not treating larvae, you're treating the adult population.

SGT. DANIELS: Absolutely.

Q Yeah, please go on.

SGT. DANIELS: Our system has the capability of doing a -- very different missions, but predominately for mosquitoes. It is an ultra low volume. Normally, we're spraying at a half ounce per acre, and sometimes when you get heavier populations of mosquitoes, we will increase to almost three quarters of an ounce per acre when you do have a heavy emergence of the mosquitos, such as what we did in some areas -- not all, just in some areas in southern Louisiana.

The -- the system is a roll-on, roll-off capability onto the C- 130. Basically, they took the standard cargo pallets that are used on many aircraft around the world to -- especially our military aircraft, and they modified those and mounted 4(00), 500 gallon tanks onboard, a flush or deluant tank and a control module. This gives us the ability to configure the aircraft very rapidly, and of course, deconfigure the aircraft very rapidly from spray to standard tactical airlift or back and forth as designated and/or needed.

MR. SELBY: Thank you, sir.

And Scott, you were on the line next.

Q Yeah, this is Scott from floppingaces.net. No, we're not a gambling site. (Chuckles.) I was wondering, are these the first operations that you've done in combatting mosquitoes and biting flies and that kind of thing, or have there been earlier examples of this kind of thing with other hurricanes and other disasters? Also, is it contained to just operations here in the U.S., or is it outside as well?

COL. WILLIAMS: Major Haagsma and I will talk about it a little bit -- this is Lieutenant Colonel Williams. But just to give you a history, the aerial spray capability has been in the Air Force Reserves since 1973. We inherited the spray capability from Rickenbacker and --

MR. : (Off mike.)

COL. WILLIAMS: -- since 1992.

So we've been in the aerial spray business. And along with the systems and the technology from Rickenbacker, we inherited the knowledge base of people that came with it as well and have continued to train in this area for the post-disaster response mission. We've predominately done it in the U.S. In fact, I don't know of any missions that we've conducted other than Puerto Rico, but -- go ahead.

MAJ. HAAGSMA: Yeah, even going back more historically, I guess, aerial spray operations actually started in World War II primarily because they found that more soldiers were being affected and/or dying from malaria and other insect-transmitted diseases than were actually being killed in combat.

So the Department of Defense, which was the Department of --

Q War.

MAJ. HAAGSMA: Department of Defense --

COL. WILLIAMS: War -- War Department.

MAJ. HAAGSMA: Department of War in World War II deemed it was necessary and, in fact, very important to start these aerial spray operations. And of course, it was also very good that at the time, some of these synthetic chemicals had actually been invented that were extremely effective on some of these mosquito vector flying insects, specifically DDT.

So to answer the rest of your question, we've been involved in contingencies here at the 910th Air Wing and the 757th Air Lift Squadron since 1992. The largest scale one that we did was after Katrina and Rita three years ago, and -- or we sprayed 2.88 million acres, and that was in Louisiana and Texas. We were deployed approximately six-and-a-half weeks with two C-130s and a spare C-130. So, you know, as long as the weather cooperates, we can get up and spray for the mosquitoes and eradicate the areas that the state entomologists request us to spray.

COL. WILLIAMS: And indeed, our forte is the fact that we can cover a lot of acreage in a very short period of time.

MAJ. HAAGSMA: Very efficiently.

COL. WILLIAMS: Yeah, as opposed to what some of the more smaller platforms like a two engine prop aircraft can do.

Q What -- at what point do you determine that spraying is needed? Because I'm right by you guys -- I'm here by Akron Canton Airport. We've got mosquitoes all the time, sometimes pretty bad. Obviously after a hurricane, they're extremely bad. But is there a threshold at which point you say, wow, we've got to bring in the aerial sprayers?

COL. WILLIAMS: It all depends on what the local mosquito abatement districts feel is a threshold that's appropriate for spraying or some kind of application. And that can vary throughout the country. And in fact, usually with most states, there's also a state entomologist who can coordinate the efforts of some of these mosquito abatement districts and determine when spraying is necessary.

In the case of this particular contingency, it was the state entomologist that got involved. And part of the problem was, a lot of the infrastructure that was knocked out after the hurricane -- and some of the local mosquito abatement districts were simply not capable of the level of treatment that was necessary. And in that case, the state entomologist coordinated with us. And essentially, what we were in this case is applicators, and that's all we were. I mean, we certainly coordinated on an entomological level with the state entomologist, but he was definitely the one that determined when spraying was necessary and what areas were necessary to be sprayed.

MR. SELBY: Okay. And Chuck, did you have any follow-up questions? Q Yeah.

COL. WILLIAMS: Hey Chuck?

Q Yeah?

COL. WILLIAMS: This is Lieutenant Colonel Williams. I just wanted to clarify. When Sergeant Daniels talked to you about space spraying and you wanted to -- and asked if this was an aerial spray, we need to talk about the

peak activity of the mosquitos with which we targeted, and also the chemical with which we utilized.

And we utilize the chemical two hours prior to sunset, no earlier.

That is peak activity for these flying mosquitoes. And obviously, we want to get them in the air because the mist that we spray is so fine, down around the measurement of .50 microns, it's very small. And what it does is it attaches itself to the fine hairs on the insect that we've targeted, and it kills it. So that's why we do an aerial spray as opposed to a ground spray.

Q And because of when you need to do it, your mission time's limited, then.

COL. WILLIAMS: It is limited. That's true.

Q Okay. What I wanted to ask was -- I mean, could I get a description of the personnel requirements for a mission, and also a description of the length and the width of a typical pass when you're spraying?

COL. WILLIAMS: The package that we took down this time was approximately 53 people. And it was comprised of maintenance personnel, communications personnel, public affairs and also operators for the aircraft. We fly with a pilot, copilots, a flight engineer, a navigator and two spray operators which handle the equipment in the back. And based on the requirements of our entomologists, as far as the acreage it needs to be sprayed and the amounts, what we're going over -- go ahead. Go ahead and chime in here.

MAJ. HAAGSMA: Okay. Yeah, basically, as far as some of our parameters go --

MR. : Don't forget your -- (off mike).

MAJ. HAAGSMA: (Chuckles.) This is Major Haagsma. What we're really looking at on a per-aircraft basis when we actually get up and spray is a swath-width of approximately 2,000 feet. And this is like also largely dependent on, like, the weather conditions, for instance. If the -- there was not a lot of wind to move the aerosol through the column of air, we'd probably like, decrease that swath-width significantly -- possibly to even 1,000 feet, allowing the material to get diluted in that column of air more effectively.

But for the purposes of this last contingency, we were applying a 2,000-foot swath-width. With one aircraft, we can apply approximately 930 acres per minute, so you can see that we can cover a lot of area in a very short period of time. And again, as far as the parameter is going, we're flying at about 150 feet above ground level. So for an aircraft as large as a C-130, that is quite close.

Q And with the MASS system, they feed it out the rear of the aircraft. Is that the way the -- your system works -- it goes out the rear or the -- is it wing-mounted?

SGT. DANIELS: Actually, we have the capabilities -- again, Sergeant Daniels here -- we have the capabilities to go wing or fuselage, and fuselage we have an access hole cut through our paratroop doors, and that is where our booms are inserted and they stick out approximately six feet away from the aircraft extending to six feet out. And for this particular application down there, we

were running six nozzles on the left and seven nozzles on the right. And that's just a standard, agricultural T Jet nozzle that we use for applying the product.

Q Okay, thank you.

MR. SELBY: And Scott, did you have some follow up questions?

SGT. DANIELS: Yeah, I'm curious. Is it -- are the sprayers only used for -- or only capable of being used to combat mosquito populations and that kind of thing, or can it also be used to like, for spraying oil dispersants in the case of an oil spill like, you know, we had with the Exxon-Valdez or maybe some -- or maybe used in some conjunction with response to a WMD attack.

MAJ. HAAGSMA: Yeah -- this is Major Haagsma. Our primary mission is for troop protection against some of these insects that can carry disease. However, we do have additional capabilities.

For instance, we also do some deposit applications for the application of herbicide, specifically to control some invasive species, and this is like, prevalent with some of the ranges that we have out west. Most of these herbicide applications are done on DOD property for the benefit of the DOD.

But as you said, we also have the capability of actually spraying oil dispersants as well. And this like, stemmed from, of course, the Exxon-Valdez tragedy that happened some years ago. And it was determined that it was necessary, I believe, through the Department of Transportation, specifically the Coast Guard, to be able to develop some kind of capability to mitigate the effects of any kind of major offshore oil spill on or around or near the continental United States.

MR. : (Off mike.)

MAJ. HAAGSMA: Oh. Yes, we've also done some work with decontamination missions. Specifically, this has only been in the testing and -- or I should say in the testing stage. However, there has been some talk of potentially utilizing us for large scale decontaminations in the aftermath of, as you say, some kind of attack. So these are definitely in the planning stages.

Q Thanks.

Q One more from me, William.

MR. SELBY: Sure, go ahead.

Q Okay. Colonel Williams, October 1, NORTHCOM stood up a civilian assistance capability to include, at least temporarily, some chemical, biological warfare abatement and then some other resources, including an infantry brigade, I believe. What you do sounds like -- very similar tasking to what NORTHCOM was telling us a couple of weeks ago. Are you part of that?

You know, the ultimate response to an incident, or are you independent of the -- of -- the NORTHCOM --

COL. WILLIAMS: Well, we haven't -- we haven't been in any discussion with NORTHCOM about that kind of capability, but the capabilities that Major Haagsma spoke of just a couple of seconds ago -- some of those are just in the

planning stage and testing phases. So no, we haven't had any discussion with NORTHCOM, although my guess is that they realize that we take care of our primary mission, but we have capabilities that might extend beyond that.

Q Well, I guess where I was more headed was you respond due to a civilian request for military assets that the civilian side is unable to provide. That's classic National Incident Management System --

COL. WILLIAMS: It's our post-disaster response capabilities. And, you know, let's go back to Katrina and Rita, which was not only an incredible disaster, but it taught us a lot about our post-disaster response all the way around. And we're talking about at the state level, at the FEMA level at the Center for Disease Control level. And obviously when something that traumatic happens, they do request that the military participate in significant numbers.

And as far as your question is concerned, you know, we need to be requested before we respond. But make no mistake that when there is a hurricane that is threatening the coast of the United States, you know, we start to gin up, we start to talk, we start to find out -- we talk to our Reservists. We find out who would have the availability to deploy within 24 hours to go help the folks that were affected by the hurricane.

Is that what you wanted to know?

Q Yes, sir.

COL. WILLIAMS: Okay.

Q And Major Haagsma, what insects does this particular insecticide affect? And what did you do to avoid potentially harming insect populations that you didn't want to affect?

MAJ. HAAGSMA: Okay. This product that we're using is in the organophosphate class of insecticides. The organophosphate class of insecticides have been around for probably about 40 to 50 years. Some typical examples include malathion -- this is the same class of chemical as malathion.

Basically, what's really important is the rates that are being applied. As Paracelsus said back in 1492, the dose is the poison. And so we have been doing some testing on that as well, because, of course, we were very, I guess, interested in maintaining like, beneficial insect populations. Specifically, the things that we run into are like, potential exposure to bees. We find that using that small of a chemical -- or small of amount of a chemical typically affects very small flying insects, of which mosquitoes would be one.

And we find out some of the larger species of insects from some of the testing that we've done, for instance, down in Paris Island -- they actually are not affected significantly, and these would include the larger insect species like dragonflies and insects of this nature, which are actually quite beneficial because they actually do take out some of the other mosquito populations as well.

However, one thing that is inherent with DIBROM -- it's extremely toxic to bees, and so we have to be very careful in any areas that we are actually spraying that we don't actually apply directly to bees. And one way we do that is, A, we adhere to the label, which strongly recommends that this -- (inaudible) -- material isn't applied before two hours prior to sunset. And of

course, most of the time at the end of the day, bees are actually back in the hive so that -- they are somewhat protected. And we also require a 24-hour notification prior to application as well as notification on a lot of these states or local agencies' bee hotline which alerts all the local beekeepers of our activities.

Q They can cover their hives?

MAJ. HAAGSMA: Yeah. They can cover it up and take the appropriate precautions.

All right, thank you.

MR. SELBY: Thank you, sir.

And Scott, did you have any more to follow up?

Q No, other than my local complaint about the mosquitoes that are nearby Youngstown. (Laughter.)

MAJ. HAAGSMA: A follow-up on that one too. It all depends on, like, what people perceive the problem to be. And of course, that's radically different in different parts of the -- (laughter) -- for instance, you know what, we go to some places up in North Dakota and if you get, you know, 30 insects landing on you per minute, that's considered actually quite light.

Q Really?

MAJ. HAAGSMA: Yeah. Q Wow.

MAJ. HAAGSMA: In places that there's actually no tolerance for mosquitoes of any kind. And of course you know, there's a significant issue because like, in some places, specifically at -- with our Canadian brethren, there have actually been cases of complete exsanguination of mammals by mosquitoes. It's all like, largely dependant on where you live.

Q No chance in getting you guys to turn left and spray my house, huh?

MR. : (Off mike.)

COL. WILLIAMS: Scott, just think, in another month-and-a-half, the snow will be flying and there will be no mosquito issues in your neighborhood. (Laughter.)

Before we sign off, unless there's any other questions, I just want to encourage you to log onto our website here, which is [www.youngstown.af.mil](http://www.youngstown.af.mil).

Q Will do. Thank you very much for your service and all your efforts, guys.

COL. WILLIAMS: Yes, sir.

MR. : Thank you, sir.

MR. SELBY: And Lieutenant Colonel Williams, did you have any closing remarks other than website, or -- ?



COL. WILLIAMS: You know, we just continue to train for this mission. We hate to see any kind of disaster hit anyone and affect those on American soil, but we do maintain the capability and we're ready to deploy as soon as needed to provide relief to those particular areas.

And we thank you for your time and your questions and most certainly your interest.

MR. SELBY: Thank you very much, sir. And thank you to the bloggers for all your comments and questions today. Today's program will be available online at the Bloggers link on [dod.mil](http://dod.mil), where you'll be able to access the story based on today's call, along with source documents, such as the audio file and print transcripts.

Again, thank you, sir. And thank you to our blogger participants.

Q Thank you.

MR. SELBY: This concludes today's event. Feel free to disconnect. Thank you.

END.